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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,597	08/05/2003	Tsutomu Nakashima	62758-050	4818

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EXAMINER

BLACKMAN, ROCHELLE ANN J

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,597

Applicant(s)

NAKASHIMA ET AL.

Examiner

Rochelle Blackman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08/05/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "adjustment mechanism" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show an "adjustment mechanism" as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: On pg. 29, line 24, "measuring light receiver 51" should - -measuring light receiver 52". On pg. 13, lines 1-9 should be omitted.

Appropriate correction is required.

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Claim Objections

Claims 9, 11, 14, and 20 are objected to because of the following informalities: In claim 9, lines 6, 11, 13, and 15; claim 11, line 5; claim 14, line 5; and claim 20, line 5, "prizm" should be - -prism- -.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Silverstein et al., U.S. Patent Application Publication No. 2003/0227597.

Regarding claims 1-8, Silverstein discloses a "projection type image display apparatus"(see FIGS. 1-8), comprising: a "light source"(see 15 of FIG. 1); an "illumination optical system"(see 20 of FIG. 1); a "reflection image display device"(see 55 of FIG. 1 or 210 of FIGS. 3 and 8); a "projection lens"(see 70 of FIG. 1 or 285 of FIGS. 3 and 8); a "reflection polarizing plate which is located just before/after said reflection image display device in light path, and has function as polarizer and analyzer for said reflection image display device by diffraction"(see 50 of FIG. 1 or 240 of FIGS. 3

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and 8); and “either of an auxiliary polarizer which is located between said light source and said reflection polarizing plate in a light path and an auxiliary analyzer as an absorption polarizing plate which functions as an analyzer located between said reflection polarizing plate and said projection lens in said light path”(for “auxiliary polarizer”, see 45 of FIG. 1 or 230 of FIGS. 3 and 8); “wherein an image light reflected by said reflection image display device is irradiated on a working plane side of said reflection polarizing plate, and then reaches said projection lens after reflecting on said reflection polarizing plate”(see “reflection image display device” 55, 210, “reflection polarizing plate” 50, 240, and “projection lens” 70, 285 in FIGS. 1, 3, and 8); “wherein a reflection axis of said reflection image display device is rotated at a predetermined angle based on a polarization characteristic of said reflection image display device”(see “reflection image display device” 210 in FIG. 5a); “an adjustment mechanism which adjusts a reflection axis of said reflection polarizing plate; an adjustment mechanism which adjusts a reflection axis of said reflection polarizing plate”(see paragraphs [0070]-[0074], [0079], [0082], and [0088]); “an adjustment mechanism which rotates at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer around an optical axis; wherein at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer is rotated around an optical axis in a way to decrease an angle difference from a reflection axis of said reflection polarizing plate, by a second predetermined angle based on a characteristic of said reflection image display device; an adjustment mechanism which rotates at least one of an absorption or reflection axis of said auxiliary

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polarizer and an absorption axis of said auxiliary analyzer around an optical axis; wherein at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer is rotated around an optical axis in a way to decrease an angle difference from a reflection axis of said reflection polarizing plate, by a second predetermined angle based on a characteristic of said reflection image display device”(see paragraphs [0067], [0071], [0074], [0080], and [0088]).

Regarding claims 9-16, Silverstein discloses “projection type image display apparatus”(see FIGS. 1-8), comprising: a “light source”(see 15 of FIG. 1); an “illumination optical system”(see 20 of FIG. 1); a “reflection image display device”(see 55 of FIG. 1 or 210 of FIGS. 3 and 8); a “projection lens”(see 70 of FIG. 1 or 285 of FIGS. 3 and 8); a “reflection polarizing prizm incorporating a reflection polarizing plate which functions as a polarizing plate by diffraction”(see *MacNeille type glass prism* in paragraph [0038]); and “either of an auxiliary polarizer which is located between said light source and said reflection polarizing prizm in a light path and an auxiliary analyzer as an absorption polarizing plate which functions as an analyzer located between said reflection polarizing prizm and said projection lens in said light path”(for “auxiliary polarizer”, see 45 of FIG. 1 or 230 of FIGS. 3 and 8); “wherein said reflection polarizing prizm is located just before/after said reflection image display device”(although the “reflection polarizing prizm” is considered to be the *MacNeille type glass prism* and is not shown, its location is considered to the same as element 50 or 240 in FIGS. 1, 3, and 8); “wherein a reflection axis of said reflection image display device is rotated at a predetermined angle based on a polarization characteristic of said reflection image

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display device”(see “reflection image display device” 210 in FIG. 5a); “an adjustment mechanism which adjusts a reflection axis of said reflection polarizing prizm; an adjustment mechanism which adjusts a reflection axis of said reflection polarizing prizm”(see paragraphs [0070]-[0074], [0079], [0082], and [0088] - although the “reflection polarizing prizm” is considered to be the *MacNeille type glass prism* and is not shown, it is considered to be rotated in the same way as element 50 or 240 in FIGS. 1, 3, and 8); “an adjustment mechanism which rotates at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer around an optical axis; wherein at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer is rotated around an optical axis in a way to decrease an angle difference from a reflection axis of said reflection polarizing plate, by a second predetermined angle based on a characteristic of said reflection image display device; an adjustment mechanism which rotates at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer around an optical axis; wherein at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer is rotated around an optical axis in a way to decrease an angle difference from a reflection axis of said reflection polarizing prizm, by a second predetermined angle based on a characteristic of said reflection image display device”(see paragraphs [0067], [0071], [0074], [0080], and [0088], here, the wire grid polarizer is considered to be replaced by the *MacNeille type glass prism*).

Regarding claims 17-20, Silverstein discloses a "projection type image display apparatus"(see FIGS. 1-8) comprising a "light source"(see 15 of FIG. 1), an "illumination optical system"(see 20 of FIG. 1), a "reflection image display device"(see 55 of FIG. 1 or 210 of FIGS. 3 and 8), and a "projection lens"(see 70 of FIG. 1 or 285 of FIGS. 3 and 8), "wherein said apparatus comprises a polarization converter which polarizes light from the light source in a specific direction and emits it as such"(see 20 of FIG. 1) and; as "polarizers/analyzers for the reflection image display device, a reflection polarizing plate or reflection polarizing prism which functions as a polarizing plate by diffraction"(see 50 of FIG. 1 or 240 of FIGS. 3 and 8); and "at least either of an auxiliary polarizer which is located between said light source and said reflection polarizing plate or reflection polarizing prism in a light path and an auxiliary analyzer as an absorption polarizing plate which functions as an analyzer located between said reflection polarizing plate or reflection polarizing prism and said projection lens in the light path"(for "auxiliary polarizer", see 45 of FIG. 1 or 230 of FIGS. 3 and 8), and "wherein when the contrast ratio of said polarization converter is expressed by A, that of said auxiliary polarizer by B, that of said auxiliary analyzer by D, a transmission contrast ratio and reflection contrast ratio of said reflection polarizing plate or prism by C and E, respectively, in a structure where reflected rays from said reflection image display device are reflected by said reflection polarizing plate or prism before reaching the projection lens, a following relation holds: $A*B*C=(0.5-5)*D*E$, and in a structure where reflected rays from said reflection image display device pass through said reflection polarizing plate or prism before reaching the projection lens, a following relation holds: $A*B*E=(0.5-5)*D*C$ "(see

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paragraphs [0042-0043]); "wherein a reflection axis of said reflection image display device is rotated at a predetermined angle based on a polarization characteristic of said reflection image display device"(see "reflection image display device" 210 in FIG. 5a); an adjustment mechanism which adjusts a reflection axis of said reflection polarizing plate or said reflection polarizing prizm; an adjustment mechanism which adjusts a reflection axis of said reflection polarizing plate or said reflection polarizing prizm"(see paragraphs [0070]-[0074], [0079], [0082], and [0088]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

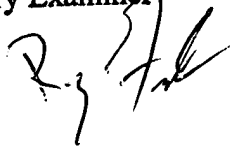
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RB

Rodney Fuller
Primary Examiner

A handwritten signature in black ink, appearing to read 'R. Fuller', is written over the printed name and title of the Primary Examiner.